

WHAT IS CLAIMED IS:

1. A genetically modified plant that expresses an immunocontraceptive comprising an egg-specific polypeptide or sperm-specific polypeptide.

2. The genetically modified plant of claim 1, wherein said sperm-specific polypeptide is lactate dehydrogenase-C or an antigenic fragment thereof.

3. The genetically modified plant of claim 2, wherein said lactate dehydrogenase-C is a rodent lactate dehydrogenase-C.

4. The genetically modified plant of claim 3, wherein said rodent lactate dehydrogenase-C is a rat or mouse lactate dehydrogenase-C.

5. The genetically modified plant of claim 2, wherein said antigenic fragment is selected from the group consisting of amino acids 5-17, 44-58, 61-77, 97-110, 180-210, 211-220, 231-243, 283-306, 307-316, and 101-115 of murine lactate dehydrogenase-C.

6. The genetically modified plant of claim 1, wherein said plant is selected from the group consisting of potato, tobacco, corn, banana, wheat, rice, fruit, vegetable, legume, and grain crop.

7. A method of decreasing the fertility of an animal, comprising the step of:  
15 providing said animal the genetically modified plant of claim 1 thus allowing said animal to ingest the plant.

8. The method of claim 7, wherein said animal is  
20 selected from the group consisting of mouse, rat, deer, elephants, water buffalo, feral horses, foxes, urban or wild dogs, urban or wild

cats, rabbits, and other potentially overpopulated species causing economic damage to society.

5                   9. A genetically modified plant that expresses a sperm-specific polypeptide lactate dehydrogenase-C or an antigenic fragment thereof.

10                   10. The genetically modified plant of claim 9, wherein said lactate dehydrogenase-C is a rodent lactate dehydrogenase-C.

11. The genetically modified plant of claim 10, wherein  
15 said rodent lactate dehydrogenase-C is a rat or mouse lactate dehydrogenase-C.

12. The genetically modified plant of claim 9, wherein  
20 said antigenic fragment is selected from the group consisting of amino acids 5-17, 44-58, 61-77, 97-110, 180-210, 211-220, 231-

243, 283-306, 307-316, and 101-115 of murine lactate dehydrogenase-C.

5                    13. The genetically modified plant of claim 9, wherein said plant is selected from the group consisting of potato, tobacco, corn, banana, wheat, rice, fruit, vegetable, legume, and grain crop.

10                   14. A method of decreasing the fertility of an animal, comprising the step of:  
allowing said animal to ingest the genetically modified plant of claim 9.

15                   15. The method of claim 14, wherein said animal is selected from the group consisting of mouse, rat, deer, elephants, water buffalo, feral horses, foxes, urban or wild dogs, urban or wild cats, rabbits, and other potentially overpopulated species causing  
20 economic damage to society.